

[0050] On the basis of the movement calculation set calculated by the movement detecting program, the character movement controlling program to be described later controls the movement of the user character. Accordingly, the user can control the travel speed, direction, travel acceleration or the turning angle of the user character in correspondence with a distance or angle between the two points touched by his two fingers, etc.

[0051] Furthermore, the movement detecting program, when the distance and angle between the two touching points calculated by the positional relationship calculating program changes, changes the movement calculation on the basis of these change amounts. Specifically, the travel speed of the user character is changed on the basis of the change amount of the distance between the two points; the travel acceleration of the user character is changed on the basis of the change amount of the speed. For example, on the basis of the change amount of the distance, acceleration or deceleration of the travel speed is set. In a case the distance is changed to be increased, the acceleration of the travel speed is set and in a case that distance is changed to be reduced, the deceleration of the travel speed is set. Furthermore, the turning angle of the user character is changed on the basis of the change amount of the angle between the two points. In addition, the display position of the user character is set on the basis of the central point currently calculated.

[0052] The movement controlling program described later controls the movement of the user character on the basis of the movement calculation changed by the movement detecting program. Accordingly, the user can change the travel speed or turning angle of the user character by changing the distance or angle between the two points.

[0053] The movement controlling program is a program for controlling the movement of the user character. The movement of the user character is controlled on the basis of the movement calculation. More specifically, the travel of the user character is controlled on the basis of the travel speed of the movement calculation detected by the movement detecting program. Furthermore, the turn, rotation, or change of direction of the user character is controlled on the basis of the turning angle of the set movement calculation. In addition, the display position of the user character is controlled on the basis of the display position of the set movement calculation.

[0054] Furthermore, touching area detecting program is a program for calculating, in response to a simultaneous touch operation of the touching points by the user, a touching area of the points. That is, according to this program, at least one of an area touching by the user is calculated. Here, the area of the touching points is an area formed by the touching points joins together. Furthermore, to detect the touching points that are joining together, it is easy to calculate the shape and size of the touching area.

[0055] While the above program and controller has been described primarily in detecting and calculating the touching position signal, any form of detecting and calculating which provide similar functionality is suitable to implement the invention.

[0056] One embodiment of the flexible multi-touch screen device is available to comprise a processor configured to execute instructions and to carry out operations associated with the device. For example, using instructions retrieved for example from memory, the processor may control the reception and manipulation of input and output data between com-

ponents of the device. The processor can be a single-chip processor or can be implemented with multiple components.

[0057] One embodiment of the flexible multi-touch screen device is available to communicate with others. In a conventional implementation, the communications module will enable a communications network supporting conventional software and protocol stacks as well as the hardware supporting for wired or wireless operation within the system or detachable with the system. These communication technologies may be, Ethernet, PSTN, ISDN, ADSL, TCP/IP protocols, 802.11b, 802.11n, 2G (GSM, GPRS, CDMA, etc), 3G (WCDMA, CDMA2000, etc), 4G (OFDM, etc), 5G, WiFi, WiMax, WLAN, WiBro, MobileFi (IEEE 802.20), infrared rays, Ultra Wideband, ultrasound, microwave, Very small aperture terminals, Advanced Communication Technology Satellite, Digital Video Broadcasting (BVD-S, BVD-S2, BVD-C, BVD-T, BVD-H), MediaFLO, Bluetooth wireless standards or any other communication network. Including communications module, the system may be a mobile phone, PDA, hand-held electronic device, menu, television, monitor, remote control, keyboard, questionnaire, notebook computer or other devices needed in communication with others.

[0058] One embodiment of the flexible multi-touch screen device is available to store data. In a conventional implementation, the storage media or memory will enable a data storage supporting conventional software as well as the hardware supporting for storage within the system or detachable with the system. These storage media may be hard disk, tape, diskette media, CD, DVD, Flash memory, RAM memory or any other storage media or memory. Including storage media, the system may be a movie player, computer, music player, electronic book, electronic paper, electronic art paper, electronic picture, electronic drawing, object of art, window, windscreen, business card, tag, controller, game player, camera, calculator, video camera, advertisement display, electronic notice board, sale machine, service machines, watch, clock, clothes, glasses, keyboard, label, board for teaching, database device or other device needed in storage media or memory.

[0059] One embodiment of the flexible multi-touch screen device is available to positioning. In a conventional implementation, the positioning module will enable positioning supporting conventional software as well as the hardware supporting for positioning within the system or detachable with the system. These positioning modules may be GPS, A-GPS, E-OTD, TDOA, AFLT or any other positioning technique. Including positioning module, the system may be an electronic map, GPS device, electronic position device or other device need positioning. If use transparent display, it may be part of windscreen.

[0060] FIG. 5 is one embodiment of device which comprises a flexible multi-touch device 50 and an image 51 display on it. It may roll up if it is not in use.

[0061] While the above invention has been described primarily in relation to flexible multi-touch screen device, the entire components may have flexible property, any form of system which provides similar functionality is suitable to implement the invention.

1. A touch panel, with a flexible property, comprises:
 - a) A flexible panel layer; and
 - b) One or more sensors configured to have capability of detecting a plurality of simultaneous touching positions